

A NEW SPECIES OF FILCHNERELLA KARNY FROM CHINA (ORTHOPTERA, ACRIDOIDEA, PAMPHAGIDAE)

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Abstract A new species of the genus *Filchnerella* Karny, *F. amplivertica* sp. nov., is described from Ningxia, China. The new species is similar to *F. baiki* Ramme, 1931, but differs from the latter in: 1) lower area of hind femur on inner side red in apical part only, 2) apex of tegmina in male definitely not reaching base of epiproct, 3) vertex in female wide, width between two eyes is about 6 times as wide as frontal ridge between bases of antennae, and 4) length of body in female 37.6–42.2 mm. The type specimens are deposited in the Museum of Hebei University.

Key words Orthoptera, Pamphagidae, *Filchnerella*, taxonomy, new species, China.

Introduction

The genus *Filchnerella* Karny (Acridoidea, Pamphagidae) was erected in 1908 and includes 17 species distributed mainly in northwest China, such as Gansu, Qinghai, Ningxia and the west of Neimenggu (Bei Bienko, 1948; Chang *et al.*, 1978; Eades & Otte, 2008; Huo, 1994; Karny, 1908; Liu, 1982; Ramme, 1931; Xi & Zheng, 1985; Xia *et al.*, 1994; Yin, 1984; Yin *et al.*, 1996; Zheng, 1992; Zheng, 1993; Zheng & Fu, 1989; Zheng & Gow, 1981; Zheng & Xi, 1985). The main characters of the genus are: antennae filiform; frontal ridge with a weak depression below the median ocellus, its dorsal part between bases of antennae slightly projecting forward; median ocellus placed on the surface of projecting part, visible in frontal view; vertex in profile making a round angle with the dorsal part of frontal ridge; fastigium near right angle, lateral facial carinae not elevated into lamellate, visible in side view; tegmina of male shorter than pronotum, if longer than pronotum, distinctly narrowed apically from the middle; middle tibia on dorsal side with row of teeth or tubercles; hind femur slightly widened, its dorsal carina straight, ventral carina not sinuous; hind tibia with distinct external apical spine.

While identifying the grasshopper specimens collected from Ningxia, China in June 2003, a new species of genus *Filchnerella* Karny, 1908, i. e. *F. amplivertica* sp. nov. was found and is described below. The type specimens are deposited in Museum of Hebei University.

Filchnerella amplivertica sp. nov. (Figs. 1–5)

Holotype ♂, Zhongwei, Ningxia, 27 July 2003, II

Xirrjiang and WANG Werr Qiang. Paratypes: 10 ♂ & 6 ♀, same data as that of holotype.

Male. Body medium sized, thickset, with hairs, especially noticeable on legs. Vertex short and wide, width between two eyes is about 4 times as wide as frontal ridge between bases of antennae; lateral aspects of vertex edged by distinct carina that extend to eyes; fastigial furrow present. Vertex and dorsal side of head depressed, with granular and club-like projection; superocellar foveolae irregular circle, shallow, flat; preocellar foveolae irregular, lower margin sometimes not clear. Frontal ridge distinct, whole length with a groove, between the bases of antennae slightly projecting forward, constructed slightly under ocellus, widened gently downwards, widen distinctly on base of labrum. Lateral facial carinae distinct, but invisible in dorsal view. Eyes larger, near circle. Antennae longer, 16–18 segments, length nearly equal to total length of head and pronotum, length 2 times width of the middle part. Pronotum rough, with short subuliform projection, anterior and posterior margin angled protruding; median carina elevated into lamellate, strongly incised on the posterior transverse groove; metazona almost equal in length to prozona, in prozona median carina incised by the 2 transverse grooves, in metazona carina arc-like raised. Prosternum with a strong lamellate process on anterior margin which emarginated in middle part, with or without concave on lateral protruding; interspace of mesosternum lateral lobes trapezoid, wider, the narrowest part wider than the broadest part of lateral lobes. Tegmina and hindwings developed, apex definitely not reaching base of epiproct. Hind femur wide and compressed, length is 3 times the width of broadest

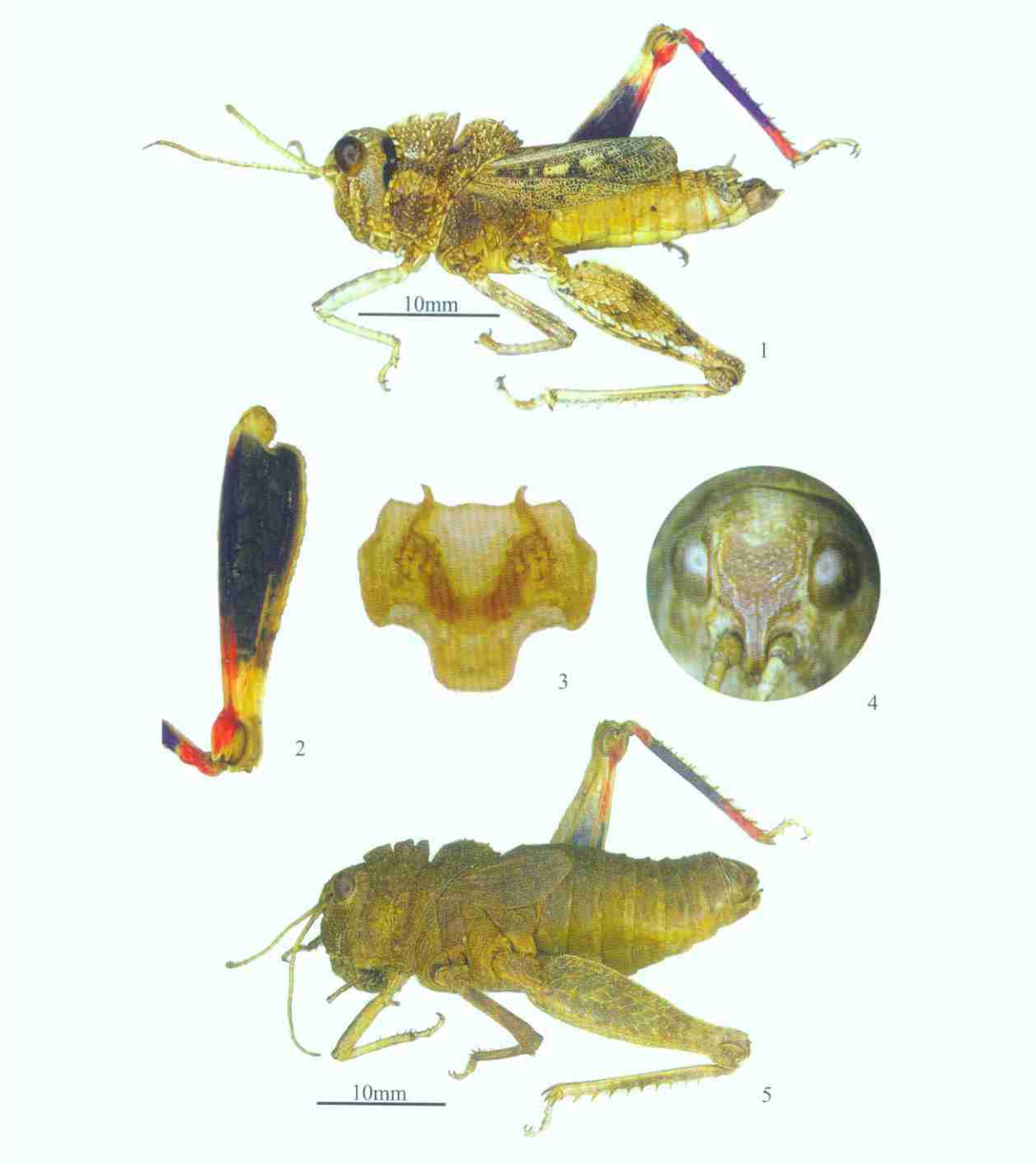
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part; upper median carina of hind femur serrated, with are like concave near apex of knee. Hind tibia with apical spine on inner and outer side, with 10 spines on upper margin of external side and 9 spines internal side (including apical spine). Arolium between claws of tarsus larger, its apex reaching or exceeding beyond the middle of claws. Tympanum organ developed, tympanal aperture expanded, tympanic flap smaller. Krause's

organ near long triangle, with thinly rugose on surface. Abdomen dorsally with 3 rows of tubercles, middle row plate like, distinct especially. Epiproct near tongue-like, with longitudinal groove in the middle. Cercus long conical. Subgenital plate short conical. Epiphallus shield like, width larger than length, with 2 group of denticle; ancorae smaller.



Figs 1-5 *Filchnerella amplivertica* sp. nov. 1. Body lateral view (♂). 2. Inner side of hind leg (♂). 3. Epiphallus (♂). 4. Vertex dorsal view (♀). 5. Body lateral view (♀).

Female. Body larger and thick. Vertex extremely wider, the width between two eyes is about 6 times as wide as frontal ridge between bases of antennae. Length

of antennae slightly shorter than length of head and pronotum together. Tegmina lobiform, separated widely dorsum, apex reaching posterior margin of second

abdominal tergite, distinctly longer than pronotum metazoan. Cercus short conical. Subgenital plate project at an angle in the middle of posterior margin. Ovipositor valve tubbiness, apex acute angle, outer margin of lower valve with concave behind the middle.

Coloration. Body filemot. Tegmina with light longitudinal stripe, dark fascia of hindwings wider, not narrowed on the third anal field. Inner side of hind femur dark blue, red in pregenicular, lower area of hind femur on inner side red in apical part only, inner margin of ventral aspect red. Inner side of hind tibia red on the base and end, dark blue on the middle.

Table 1. Comparison of the major morphological characters between *F. beicki* Ramme, 1931 and *F. amplivertica* sp. nov.

Character	<i>Fikhnerella amplivertica</i> sp. nov.	<i>Fikhnerella beicki</i> Ramme, 1931
Lower area of hind femur on inner side	Red in apical only	All red
Tegmina in male	Apex definitely not reaching the base of epiproct	Apex reaching the base of epiproct
Vertex in female	Wider, width between two eyes is about 6 times as wide as frontal ridge between bases of antennae	Narrower, width between two eyes is about 3 times as wide as frontal ridge between bases of antennae
Length of body in female	37. 6-42. 2 mm	30. 5-34. 0 mm

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Measurement. Length of body: ♂26. 9-31. 5 mm; ♀ 37. 6-42. 2 mm. Length of pronotum: ♂8. 3-10. 4 mm; ♀ 11. 3-13. 2 mm. Length of tegmina: ♂10. 4-15. 4 mm; ♀ 8. 8-12. 4 mm. Length of hind femur: ♂12. 6-15. 4 mm; ♀ 17. 2-20. 2 mm.

Diagnosis. The new species is similar to *F. beicki* Ramme, 1931 but the major differences are listed in Table 1.

Etymology. The species name is derived from Latin *ampl-* (wide) and *vertica* (vertex) meaning its wider vertex in female.

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中国短鼻蝗属一新种 (直翅目, 蝗总科, 癩蝗科)

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摘要 记述了采自宁夏中卫的短鼻蝗属1新种——宽顶短鼻蝗 *Fikhnerella amplivertica* sp. nov.。模式标本保存于河北大学博物馆。

宽顶短鼻蝗, 新种 *Fikhnerella amplivertica* sp. nov. (图1~5)
新种与裴氏短鼻蝗 *Fikhnerella beicki* Ramme, 1931 近似, 区别特征为: 后股节内侧下区仅端部红色; 雄性前翅较短, 不

关键词 直翅目, 癩蝗科, 短鼻蝗属, 分类学, 新种, 中国.
中图分类号 Q969. 265. 1

到达肛上板基部; 雌性头顶宽, 为颜面隆起在触角之间宽度的6倍; 雌性体较大, 体长37. 6~42. 2 mm。

正模 ♂, 副模 10 ♂♂, 6♀♀, 宁夏中卫, 2003-07-27, 李新江, 王文强采。

词源: 新种名出自拉丁前缀 *ampl-* (宽的), 后缀 *vertica* (头顶的), 示头顶宽的短鼻蝗。

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